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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,045	06/23/2004	Bernhard Zangerl	50406	5172
27975	7590	09/08/2006	EXAMINER	
ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A. 1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE P.O. BOX 3791 ORLANDO, FL 32802-3791			NGUYEN, NGA X	
			ART UNIT	PAPER NUMBER
			3662	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/500,045	ZANGERL, BERNHARD	
	Examiner	Art Unit	
	NGA X. NGUYEN	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/02/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 12, 14-18, 20-23, 25-29, 31-34 and 36-40 is/are rejected.
- 7) ☒ Claim(s) 13, 19, 24, 30, 35 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/02/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11-12, 14-18, 20-23, 25-29, 31-34, 36-40 rejected under 35 U.S.C. 103(a) as being unpatentable over Maki, Stanley C. in view of Hopf Elektronik GmbH and Bullock, B J.

With regarding claim 11, 22 and 33:

Maki discloses a plurality GPS antennas connected to amplifiers (See page 180-181, Antenna Receiver Redundancy section).

Hopf discloses a passive splitter to split a plurality of GPS output (See page 4). However, Hopf's device does not teach a plurality of GPS outputs connected to respective transmitter, so that each GPS output has a voltage.

Bullock discloses a DC Control Stage comprising a current measuring stage (See page 319-320, Antenna Power Supply Section). With regard to the claim, current measuring stage, Bullock teaches in the 1st and 2nd paragraph "The UT Oncore provides a means for detecting over current... The antenna power supply circuit consists of a current sense resistor, two rail to rail operational amplifiers, a pass transistor and a voltage divider to set the upper and lower limits of the under current and over current thresholds" which meet this limitation

It would have been obvious to modify Maki to have included Hopf's passive splitter to split a plurality of GPS output to have a redundant GPS antennas splitter stage for protection against failure of once of the GPS signal.

It would have been obvious to further modify Maki to have included Bullock's a DC Control Stage comprising a current measuring stage to provide proper gain control of the system for stability.

With regarding claim 12, 23 & 34, Hopf Elektronik discloses a device has 8 GPS outputs.

With regarding claim 14, 25 & 36, Bullock discloses decoupling stage for a GPS output (See 2nd paragraph, Antenna Power supply Section). Bullock teaches, "The operational amplifiers compare the voltage develop....".

With regarding claim 15, 26 & 37, Bullock discloses operational amplifiers and a switch that helps the GPS output with a highest voltage to the GPS (See above rejection).

With regarding claim 16, 27 & 38, Bullock discloses current measuring stage (See 1st & 2nd paragraph, Antenna Power Supply Section). Specification in the 1st paragraph, Bullock teaches, "The UT Oncore provides a means for detecting over current." And in the 2nd paragraph, Bullock teaches "The antenna power supply circuit consists of a current sense resistor, two rail to rail operational amplifiers, a pass transistor and a voltage divider to set the upper and lower limits of the under current and over current thresholds".

With regarding claim 17, 28 & 39, specifically in the page 319-320, 2nd paragraph of Antenna Power Supply Section, window comparator is taught by "The operational amplifiers compare the voltage developed across the current sense resistor with these thresholds. With respect to the claim of switch on mode, the 5th paragraph taught, "The output current limit is higher than previous versions of Oncore receivers. This is to support longer cable runs through the use of higher gain antennas."

With Regarding Claim 18, 29 & 40, Bullock discloses a current measuring stage comprising a pair of current measuring resistors, an operational amplifier and a transistor (See page 319-320, 2nd paragraph of Antenna Power Supply Section).

With regarding claim 20 & 31, it is well known that DC control circuit should include a lightning protection filter to protect over voltages to GPS input.

With regarding claim 21 & 32, it is well known to connect filters to amplifiers in order to suppress undesired intrusive signals (See Bullock discloses in the Improved Filtering section, page 317-318 and see figure 4).

Allowable Subject Matter

Claim 13, 19, 24, 30, 35 & 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

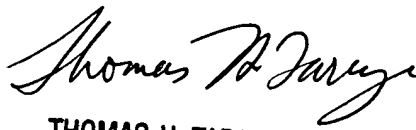
Art Unit: 3662

/ Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGA X. NGUYEN whose telephone number is 571-272-5217. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TARCZA H. THOMAS can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NXN


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